

ANNUAL REPORT

ON THE

PUBLIC HEALTH AND SANITARY
CONDITION

OF THE

RURAL SANITARY DISTRICT
OF PENRITH,

For the Year 1903.

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MEDICAL OFFICER OF HEALTH.

PENRITH:

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ANNUAL REPORT.



GENERAL CONSIDERATIONS.

The District of the Penrith Rural Council covers an area of 161,293 acres, but a large amount of this is fell land, uncultivated, and only grazed by sheep. The general characteristics are hill and dale, numerous small valleys, and the larger valley of the Eden on the East side of the district.

The highest altitudes are Crossfell on the East Side, 2930 feet, and Blencathra on the West, 2847 feet; the lowest level is about 250 feet at the extreme North of the district near Wreay and Armathwaite.

The population is entirely rural, occupying numerous villages and isolated farm houses scattered between them. It is generally well housed and fed; destitution of the extreme kind does not occur, as may be evidenced by the fact that there are only about 100 persons receiving relief in the district.

GEOLOGY.

On the West side the geological formation is chiefly Skiddaw Slate and Volcanic Rocks, and it is in this part of the district that the high ground principally occurs, viz.:—Blencathra, parts of Helvellyn and Skiddaw. Further East is a long belt of Carboniferous Limestone, running nearly North and South, which then gives place to Permian Sandstone, comprising the whole of Penrith Fell and extending across the River Eden to the slopes of the Pennine Range, where the Carboniferous series again commences on the East side of the Great Pennine Fault.

VITAL STATISTICS.

Births.

There have been 287 births registered during the year, divided amongst the three districts, as follows:—

				Males.		Females.
Penrith Rural Sub-district	..	..		37	—	36
Greystoke	..	..	..	50	—	40
Kirkoswald	..	..	..	58	—	66
				145		142

The Birth-rate is consequently 22·23 per 1000, rather under the average of 10 years.

Of these births 17 were illegitimate, giving an illegitimate Birth-rate of 1·28 per 1000 population, and 58·44 per 1000 births.

The Illegitimate Birth-rate for the last 3 years has been as follows:—

				Per 1000 Population.		Per 1000 Births.
1902	...	...	...	·89	—	41·13
1901	...	...	...	·95	—	44·76
1900	...	...	...	·98	—	46·64

The analysis of Births, according to districts, is given in the following table:—

District.	Total Births.	Illegitimate Births.	Birth-rate per 1000 population.	Legitimate Birth-rate per 1000 population.	Illegitimate Birth-rate per 1000 population.	Illegitim'te Birth-rate per 1000 Births.
Penrith Rural	73	3	22·90	21·96	·94	41·09
Greystoke	90	7	20·48	18·90	1·58	77·77
Kirkoswald	124	7	23·26	21·94	1·32	56·45
TOTALS	287	17	22·23	20·95	1·28	58·44

GENERAL MORTALITY.

Death Rate.

The number of deaths during the year has been 169; this, on an estimated population of 12,911, gives a death-rate of 13·08, a little higher than last year, but not materially so, and the usual causes at the extremes of life, account for a considerable number of the deaths.

Classification of Deaths according to age.

(a) *Under One Year.*—There have been 30 deaths of infants during the year: fourteen of these are from Developmental Diseases and entirely unavoidable; seven from Convulsions, often due to improper feeding, and the remainder from various causes.—The infantile Death-rate is consequently higher than we are accustomed to, viz.:—108·16 per 1000 Births registered, or stated in other words out of every 1000 children born 108 do not survive their first year of existence. The number of infants who died was much the greatest in the Greystoke division, the chief cause being 5 cases of Convulsions.

(b) *One Year and under Five Years.*—Here there are 9 deaths, four being due to Infectious Disease, Measles and Whooping Cough, three to Tubercular Disease, one to Convulsion, and one to Scalding.

(c) *Five to Fifteen Years.*—Only 3 deaths, one being due to general Tuberculosis.

(d) *Fifteen to Twenty-five Years.*—Nine deaths, one being due to Measles and two to Phthisis.

(e) *Twenty-five to Sixty-five Years*.—Forty-six deaths occur during these four decades, including eight deaths from Phthisis, five from Cancer, six from Pneumonia, and seven from Heart Disease. The incidence of disease can be seen from Table IV.

(f) *Sixty-five Years and upwards*.—As usual a large proportion of the Deaths recorded take place between 65 and 70 years—in this year 1903 they are 38; it is in this decade that Senile Heart Diseases and Arterial Degenerations generally begin to claim their victims.

Cancer accounts for five deaths, but Tubercular Troubles cease to be recorded.

Later on Senile Decay is the chief cause, but Influenza was a cause of death in four old men.

The age of the oldest person at death was 94 years.

The Parish of Skelton shows the largest death-rate, nearly 23 per 1000, and it is interesting to note that the Township of Berrier has had no deaths since 1897.

ANALYSIS OF THE CAUSE OF DEATH.

From the **Principal Zymotic Diseases** see Zymotic Sickness.

Five persons, four of them very old, are certified as having died from Influenza, and it is given, especially in one district, as a contributory cause in a good many more cases.

Erysipelas also is the cause of one death.

Constitutional Disease.

These account for 30 deaths, nearly all being Cancer or the Tubercular Diseases.

Cancer: There have been 12 deaths from this cause at ages from 45 to 85 years, and in the following localities:—

Castlesowerby	...	...	1	Hesket	...	...	3
Matterdale	..	...	2	Hutton-in-the-Forest	...	...	1
Dacre	...	...	1	Hutton Roof	...	...	1
Glassonby	...	...	1	Lazonby	...	...	1
Greystoke	...	...	1				

Eight of the cases were in females, but not affecting in any marked degree the reproductive organs.

The death-rate from Cancer is thus .92 per 1000 This is more than for the last few years, the figures being—

1895	...	...	1.08	1900	...	...	.75
1896	...	...	1.34	1901	...	...	.92
1897	...	...	1.35	1902	...	...	.69
1898	...	...	1.12	1903	...	...	.92
1899	...	...	.53				

In many cases the tendency to the disease appears to be hereditary, but apart from this no cause has yet been discovered. The locality maps certainly seem to show that the incidence of the disease is greater in some places than others, but no special characteristics seem to be attached to those places.

Phthisis accounts for 10 deaths, and the whole group of Tubercular Diseases 15,

The mortality rate of Phthisis is thus $\cdot77$. This is rather higher than last year, and no doubt the wet and sunless season has had something to do with the increase in mortality.

Developmental Diseases.

The deaths from this cause in infancy are rather above the average, but they are all unavoidable.

Local Diseases.

These account for 94 deaths, of which the largest number come under the heading of Apoplexy and Heart Diseases.

Deaths from Violence.

There was one death from Accidental Scalding in a child.

Two entered as Fractures, &c., were cases of Multiple Injury received on the railway. Two were Suicides, one a Cut Throat and the other caused by placing a Dynamite Cartridge in the mouth.

Deaths from Ill-defined Causes.

There is fortunately only one death, that of an infant, under this heading—the case was “Not Certified,” and is returned as “Inflammation.”

There have been five Inquests during the year, and three cases returned as “Not Certified.”

ZYMOTIC DISEASE.

Zymotic Death-rate.—There have been 37 Notifications received during the year—of these only one, a case of Erysipelas died. The death-rate from the Principal Zymotic Diseases is thus $\cdot07$; but there have also been two deaths from Measles, three from Whooping Cough, and five from Influenza, so that the total Zymotic Death-rate comes to $\cdot85$.

Smallpox: On September 11th a case of this disease was notified—it had been prevalent in the Urban District, and the infection was brought from there. As there was no Hospital at that time he was nursed at home, a large and isolated farm house, and the other occupants consented to go to an empty house half-a-mile away, which was hired for them by the Council. There was no spread from this case.

Two other cases occurred in the district: one, a tramp, worked for a farmer in Dacre parish and came into the Urban District, where he was detained—the house and barn where he had slept were thoroughly disinfected, and no further cases occurred.

This was a serious case, from the point of view of the Public Health, as the man milked cows and was engaged otherwise in handling the milk, which was sent to South Shields. The Medical Officer of Health there was informed of the occurrence.

The other case was a labourer belonging Carlisle, where he had been infected and who was working at a building at Armathwaite; he returned to Carlisle for medical advice, and was there detained. The house where he slept and the building where he worked were both disinfected, and no spread took place.

Scarlatina: There have been 20 cases of Scarlatina, and generally they have been of an average severity.

There was a small epidemic of five cases at Greystoke in the beginning of the year, in which the cause was probably due to communication with the Urban District, where there were cases.

Four cases occurred in March at Plumpton, and it is probable that other mild cases had previously been in existence, but the source of infection could not be traced.

In August there were three cases at Raughton-head, in which the infection came from Liverpool.

The rest were sporadic cases.

Eight patients were removed to Hospital, and all did well.

The following list shows the localities in which Scarlatina has occurred and the number of houses infected:—

			Houses				Houses.
Cases.			Infected.	Cases.			Infected
Dacre .. ..	..	1	—	1	Ainstable ..	..	4 — 1
Greystoke ..	..	4	—	4	Raughton Head	..	3 — 3
Plumpton Wall	..	4	—	3	Cumrew ..	..	1 — 1
Great Salkeld	..	3	—	2			

Diphtheria.: Seven cases of this disease occurred. Six were in one epidemic in the parish of Edenhall—here both the drains and the water supply were defective, but the probability is that the spread of this disease was by direct contact among the school children. The other case was in a small and damp house at Great Salkeld, which has since been uninhabited.

The cases of Erysipelas call for no comment, and no cases of Enteric Fever have been notified during the year.

There was a severe epidemic of Measles at Watermillock, which was the cause of two deaths and on account of which the school was closed for some time. Epidemics of Measles, causing closure of schools, also occurred at Great Salkeld, Kirkoswald, and Kirkland.

The schools at Dacre and Stainton were also closed on account of Whooping Cough.

During the year an arrangement has been made between the Urban and Rural Districts for the formation of a Joint Hospital Board to control the General Infectious Hospital at the Fair Hill ; also the newly-built Hospital for the reception of Smallpox cases.

For a time the district was without any accommodation for Smallpox, and an unoccupied and isolated house was put into order as a Temporary Smallpox Hospital; fortunately this was not needed, and was dismantled afterwards.

Both the present Hospitals are modern and quite satisfactory.

Disinfection is performed by a Reck's Steam Disinfector at the Hospital and by an Equifex Spray, with Perchloride of Mercury at the patients' homes.

SANITATION.

A large number of inspections have been made by the Sanitary Inspectors and myself during the year, both on account of complaints and in the course of general inspections of villages and hamlets.

A case of over-crowding occurred at Threlkeld, and the tenants were somewhat difficult to move; however, they were finally lodged in the workhouse. A cottage at Calthwaite was reported on account of unfitness for habitation, and the landlord gave an undertaking not to let it again in its present condition.

SEWERAGE AND DRAINAGE.

A considerable number of villages have a sewer, and no complaints have been made as to their working; but the outfall frequently requires a good deal more attention given to it than is at present the case.

The villages which have sewers are:—Armathwaite, Blencarn (part), Culgaith, Croglin, Great Salkeld, Glassonby, Greystoke, Kirkoswald, Lazonby, Langwathby, Little Salkeld, Newton, Penruddock, Skelton, Renwick, Stainton (part), Threlkeld, Low Hesket, and Edenhall.

CULGAITH.—A satisfactory outfall has been obtained for the sewer at the east end of the village, which will obviate the nuisance complained of through sewage finding its way into the stream at the south end of the village.

GREAT SALKELD.—The sewer has been completed during the year, and forms a satisfactory improvement to the sanitary condition of the village.

The owners at the North Dykes have received notices to have the drainage of their respective premises put into proper repair.

EDENHALL.—The sewer here, put in and maintained by the owners of the village, is not in a satisfactory state, part of it is good and is of socketed pipes, but other parts are simply stone drains and frequently have no traps, and the outfall is into a stream, which has to be railed off to prevent cattle having access to it; as there are 17 W.C.'s in the village opening into the drain this is anything but a satisfactory state of affairs, and the attention of the owner has been called to the matter.

SCAVENGING.

This is done privately, each household attending to the disposal of its own refuse. The method is fairly satisfactory enough, but individuals require to be reminded at times of their duties.

WATER SUPPLY.

The chief water supply of the district is from wells, but a considerable number of villages have a public supply from springs in their neighbourhood. All these are gravitation supplies except Hunsonby and Winskill and Glassonby, where the water of a spring is raised by a pumping ram.

The villages are:—Ainstable, Croglin, Dacre, Gamblesby, Glassonby, Hunsonby and Winskill, Kirkoswald, Lazonby, Langwathby, Melmerby, Ousby, Kirkland and Blencarn, Renwick, Skirwith, Great Salkeld, and Threlkeld. All

these seem to be working well, and I have had no complaints with reference to the quality or quantity of the water during the past year.

There are also private supplies at Greystoke and at Calthwaite.

The supply at Dacre has just been completed, and all the connections have not yet been put in.

The question of the water supply for Hesket and adjoining parishes is still under consideration, and surface water and springs forming the Bullgill beck on the slopes of Blencathra have been frequently analysed and gauged. The quality of the water is excellent, and it does not appear to have any plunto-solvent action as so many upland surface waters have; also, it cannot be obtained at a sufficient elevation above human habitation. The gauging of the stream shows wide variation from 300,000 gallons in 24 hours to 1,000,000 gallons, and in flood time it is much more. In consequence of the year 1903 being so wet, it is advisable to wait until next summer and see whether the amount of water is sufficient, as it is important from the point of view of expense, that a storage reservoir should not be made.

The water supplies at Stainton and Armathwaite are both running, but neither can be considered good supplies, as they are both liable to pollution in certain events.

There is a private supply at Edenhall, which is used by the whole village (except one house); this has been analysed on account of an outbreak of Diphtheria, and was found impure. The owner has been asked to remedy, which apparently can easily be done, as the chief fault lies in the method of collecting.

The various Slaughter-houses, Dairies, Cowsheds, and Milkshops have been inspected by the Sanitary Inspectors at intervals.

FACTORY AND WORKSHOPS' ACT, 1901.

Registers have been compiled of all places coming under the Act, which in this district chiefly consist of Blacksmiths' and Joiners' Shops. These are generally clean and have plenty of air space and ventilation, but occasionally the Sanitary conveniences are not up to date. In only one case is an out-worker employed. In a district such as this, which is mostly rural and has no large mechanical industries, the importance of this Act is very slight.

PUBLIC HEALTH ACTS.

The Infectious Diseases Notification Act was adopted in this district in 1889.

The Public Health Amendment Act (1890) and the Infectious Diseases Prevention Act (1890), in 1897.

The reports of the Sanitary Inspectors and various tables are appended,

TABLE I.

FOR WHOLE DISTRICT.

YEARS.	Popula- tion estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES.		Deaths in Public Insti- tutions.	Deaths of Non- residents register'd in District.	Deaths of residents register'd beyond District.	DEATHS AT ALL AGES. NETT.	
		Number.	Rate.*	Number.	Rate per 1000 Births registered.	Number.	RATES.*				Number	Rate.*
1893	13539	366	27.00		92.3	182	13.4	Nil.	Nil.	Nil.	Nil.	Nil.
1894	13448	327	24.35	35	107.00	188	14.00	"	"	"	"	"
1895	13387	325	25.29	34	98.42	211	15.04	"	"	"	"	"
1896	13351	330	24.99	19	62.07	163	12.09	"	"	"	"	"
1897	13313	336	25.23	26	99.69	225	16.90	"	"	"	"	"
1898	13275	291	22.12	24	82.33	175	12.96	"	"	"	"	"
1899	13237	323	24.33	34	108.01	173	13.27	"	"	"	"	"
1900	13199	289	21.89	25	86.5	191	14.47	"	"	"	"	"
1901	12995	271	20.85	26	95.94	164	12.31	"	"	"	"	"
1902	12967	279	21.30	16	51.35	160	12.31	"	"	"	"	"
Averages for years 1893--1902.	13271	313	23.73	24	88.36	183	13.67	"	"	"	"	
1903	12911	287	22.23	30	108.16	169	13.08	"	"	"	"	

* Rates calculated per 1000 of estimated population.

Total population at all ages, 13,023..... }
 Number of inhabited houses, 2743 } At Census
 of 1901.
 Average number of persons per house, 4.75 ... }

Area of District in acres ... 161,293.

TABLE II.
PENRITH RURAL DISTRICT.

NAMES OF LOCALITIES.	PENRITH SUB-DISTRICT.				GREYSTOKE.				KIRKOSWALD.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1896 ...	3227	87	35	4	4616	111	63	8	5508	132	65	9
1897 ...	3208	65	55	5	4612	110	86	11	5493	161	84	10
1898 ...	3189	75	37	5	4608	100	61	12	5478	116	77	7
1899 ...	3170	77	47	9	4604	108	57	12	5463	138	69	13
1900 ...	3151	63	56	4	4600	90	63	10	5448	136	73	11
1901 ...	3146	69	39	7	4433	92	56	8	5362	120	69	11
1902 ...	3200	64	38	2	4413	94	52	3	5354	121	70	11
Averages of years 1896 to 1902.	3182	72	45	6	4561	102	64	10	5442	134	73	10
1903 ...	3187	73	40	6	4393	90	63	16	5331	124	66	8

TABLE III.

Showing Deaths Registered from all Causes during the Year 1903.

	AGES.											Total.
	0 to 1.	1 to 5.	5 to 15.	15 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 and upw'ds	
I.—Specific Febrile Diseases	..	4	..	1	1	..	..	..	1	3	1	11
IV.—Constitutional Diseases	1	3	1	2	4	1	4	5	7	2	..	30
V.—Developmental Diseases	14	..	..	..	..	..	..	..	3	7	4	28
VI.—Local Diseases	14	1	2	6	..	7	6	14	27	13	4	94
VII.—Deaths from Violence	..	1	..	..	3	..	1	..	..	..	..	5
VIII.—Deaths from Ill-defined or not Specified Causes	1	..	..	..	..	..	..	..	..	..	..	1
Totals	30	9	3	9	8	8	11	19	38	25	9	169
I.—SPECIFIC FEBRILE OR ZYMOTIC DISEASE.												
1.—Miasmatic Diseases:												
Measles	..	1	..	1	..	..	..	..	..	..	..	2
Whooping Cough	..	3	..	..	..	..	..	..	..	..	..	3
Influenza	..	..	..	..	1	..	..	..	..	3	1	5
6.—Septic Diseases:												
Erysipelas	..	..	..	..	..	..	..	..	1	..	..	1
IV.—CONSTITUTIONAL DISEASES:												
Cancer	..	..	..	..	..	..	2	3	5	2	..	12
Sarcoma	..	..	..	..	..	1	..	..	1	..	..	2
Phthisis	..	..	..	2	4	..	2	2	..	..	..	10
Tubercular Meningitis	..	2	..	..	..	..	..	..	..	..	..	2
Tabes Mesenterica	..	1	..	..	..	..	..	..	..	..	..	2
Tuberculosis	1	..	1	..	..	..	..	..	..	..	..	1
Diabetes Mellitus	..	..	..	..	..	..	..	..	1	..	..	1
V.—DEVELOPMENTAL DISEASES:												
Premature Birth	6	..	..	..	..	..	..	..	..	..	..	6
Cardiac Malformation	1	..	..	..	..	..	..	..	..	..	..	1
Congenital Debility	5	..	..	..	..	..	..	..	..	..	..	5
Spina Bifida	1	..	..	..	..	..	..	..	..	..	..	1
Icterus Noncolorum	1	..	..	..	..	..	..	..	..	..	..	1
Senile Decay	..	..	..	..	..	..	..	..	3	7	4	14

[illegible]

TABLE IV.

Cases of Infectious Disease notified during the Year 1903.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN THE WHOLE DISTRICT.							Total Cases Notified in each locality.			No. of Cases Removed to Hospital from ea. locality		
	At Ages—Years.							Penrith	Greystoke	Kirkoswald	Penrith	Greystoke	Kirkoswald
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.						
Smallpox ...	1	...	...	...	...	1	...	...	1	...	...	...	...
Cholera ...	Nil.	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria ...	7	...	...	5	...	2	...	6	...	1	2	...	1
Membranous croup ...	Nil.	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	9	...	...	...	...	7	2	2	3	4	...	...	...
Scarlet fever ...	20	...	4	13	3	...	...	4	8	8	2	5	1
Typhus fever...	Nil.	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever...	Nil.	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing fever	Nil.	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	Nil.	...	...	...	...	...	...	...	—	...	...	...	...
Puerperal fever	Nil.	...	...	...	...	...	...	...	...	...	...	...	...
Plague ...	Nil.	...	...	...	...	...	...	—	...	...	...	...	...
TOTALS ...	37	...	4	18	3	10	2	12	12	13	4	5	2

THE RURAL DISTRICT COUNCIL OF PENRITH.

INSPECTORS' REPORT of the Sanitary Measures carried out for the Year ending December 31st, 1903.

INSPECTORS:—*East Division*: THOMAS WATSON, Kirkoswald. *West Division*: WILLIAM LEE, Penrith.

	East Division.			West Division.		
No. of Complaints	16	4	
No. of Inspections	150	165	
No. of Re-inspections	56	50	
Result of Inspections	Several Nuisances abated	Several Nuisances abated	
Orders issued for Sanitary Amendments of Houses and Premises, &c.	5	5	
Houses, Premises, &c., Cleaned and Repaired	13	5	
Whitewashed, &c.	12	1	
Houses Disinfected after Illness of an Infectious Character	15	13 houses and Greystoke School 1, and Plumpton School 1, and Stainton Blacksmith's Shop, 1	
House Drains:—					9	
Repaired, Cleansed, Trapped, &c.	6	None	
Ventilated	8	2	
Privies and W.C.'s:—					None	
Repaired, &c.	None	2	
Supplied with Water	7	None	
New Provided	6	3	
Water Supplies:—					None	
New Wells	None	2	
Wells Cleaned Out	1	1 at Dacre	
Schemes Carried Out	None		
Sewerage Works:—						
Schemes Carried Out	Part of Great Salkeld.	2 New Tank at Skelton	
Certificates for New Houses	Glassonby	4	
Licensed Cowsheds:—						
Number in District and Number of Inspections	4. Inspected once	6. Inspected twice	

SANITARY RETROSPECT.

- 1873—Kirkoswald Sewer.
- 1876—Renwick Sewer.
- 1878—Ainstable Water Supply.
Blencarn Water Supply.
Langwathby Water Supply.
- 1880—Blencowe Water Improvements.
- 1881—Great Salkeld Water Supply.
Skirwith Water Supply.
- 1884—Greystoke Sewer.
- 1887—Croglin Water Supply (Private).
Greystoke Water Supply (Private).
- 1888—Threlkeld Water Supply.
Calthwaite Water Supply (Private).
- 1889—Renwick Water Supply.
Infectious Diseases Notification Act adopted
- 1890—Great Salkeld Sewer (Part of Village).
Glassonby Sewer.
Stainton Water Supply.
Lazonby Water Supply.
- 1891—Skelton Sewer (Part of Village).
Skirwith Water Supply (Supplementary).
- 1892—Armathwaite Sewer.
- 1893—Stainton Sewer (Part of Village).
Culgaith Sewer (Part of Village).
Gamblesby Water Supply.
- 1894—Kirkoswald Water Supply.
Glassonby Water Supply.
Edenhall Water Supply (Private).
Lazonby Sewer.
- 1895—Langwathby Sewer.
- 1896—Little Salkeld Sewer (Part of Village).
Blencarn Sewer (Part of Village).
Ousby Water Supply.
Hunsonby and Winskill Water Supply.
- 1897—Threlkeld Sewer.
Melmerby Water Supply.
Public Health Amendment Act, 1890, adopted.
Infectious Diseases Prevention Act, 1890, adopted.
- 1898—Bye-Laws relating to New Buildings and Common Lodging Houses adopted.
- 1899—Croglin Sewer (Part of Village).
- 1900—Stainton Sewer (Part of Village).
- 1902—Croglin Sewer, completed.
Culgaith Sewer, completed.
- 1903—Dacre Water Supply
Great Salkeld Sewer, completed

